

## ABSTRACT

5 Despite the continuous improvement of the prior-art restraint systems severe/fatal injuries of passengers, restrained thereby, are increasing in accidents due to whiplash [8], three-point seat belts, capable of restraining only one shoulder, or lap seat belts of aeroplanes, incapable of restraining the upper part of the body and head [4, 5], and impact of their heads with aeroplane- or vehicle interiors such as steering wheel [6] or window pane [7].

10 In the principle feature of invention survival chance for babies, children and adults in real accidents of vehicles, trains or aeroplanes or during turbulence-related vibrations of aeroplanes is enhanced when restraining both shoulders and the neck of a passenger by a holder (10, 10e), whereto energy-absorbers are attachable, thus integrating the seat belt, holder and seat into an energy-absorbing safety seat and child-seat, which is transformable into a baby-cot when the seat backrest is flipped into a resting position.

15 In the second and third feature the space in the seat is exploited to accommodate a rotatable device (28a) and sets of energy-absorbers, connected to the holder, thus allowing the gradual absorption of the subenergies, resulting from the subdivision of the total energy, at the respective injury-irrelevant threshold values while damping the vibrations.

20 In the fourth feature, for the convenience of the passenger or in cases of emergency all latch plates can be easily disengaged and the rotatable device is repositioned to the resting position when pressing a master release button (84) of a lap buckle assembly.

## OTHER PUBLICATIONS

- 25 [1] Car-Magazine ADAC 1/95  
[2] Car-Magazine AMS (Auto Motor und Sport) 23/97  
[3] Car-Magazine AMS 12/99, Newspapers Wiesbadener Kurier of 28.12.98, 20.01, 22.06, 04.11.99, Frankfurter Allgemeine Zeitung of 08.09.99, Frankfurter Rundschau of 12.06.99  
30 [4] Wiesbadener Tagsblatt of 28.12.97 reporting 100 injured passengers, 10 of which severely, during turbulence-related vibrations of an aeroplane Boeing 747.  
[5] Wiesbadener Tagsblatt of 15.04.99 reporting 30 injured passengers during turbulence-related vibrations of an aeroplane Boeing 747.  
35 [6] Police accident report and photos documenting the steering wheel and -column totally deformed by the head, thrown forward, of a 34 years-old driver of a brand-new German luxury car.  
[7] Police accident report and newspaper documenting the instant death of a 21 years-old female driver in a German car, crashing into a larger German car on an urban road, due to the head impact with the window pane.  
40 [8] 34-page report by Go concerning severe/fatal injuries, submarining, head impacts and whiplash resulted from failure of conventional seat belts etc. to four German Ministers, General Attorney, Vice General Attorney, Senior Attorneys, Police Chief Directors, Police Directors etc.